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COMMITTEE OF EXPERTS ON THE
TRANSPORT OF DANGEROUS GOODS

Sub-Committee of Experts on the
Transport of Dangerous Goods

REPORT OF THE SUB-COMMITTEE OF EXPERTS ON ITS NINTH SESSION
(Geneva, 4 - 15 July 1994)

Addendum 1

Annex 1

Draft amendments to the Recommendations on the Transport of Dangerous Goods

GE.94-22907

Annex 1

DRAFT AMENDMENTS TO THE RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS

PREFACE

Amend according to ST/SG/AC.10/C.3/R.483, Annex 5, paragraph 1.

CONTENTS

Amend according to ST/SG/AC.10/C.3/R.483, Annex 5, paragraph 2.

Chapter 1: SCOPE OF THE RECOMMENDATIONS

1.17.1 The modification in document ST/SG/AC.10/C.3/16, annex 3, is cancelled.

1.23 Amend Note 2 to read:

"Toxins from plant, animal or bacterial sources which do not contain any infectious substances, or toxins that are contained in substances which are not infectious substances, should be considered for classification in Division 6.1 and assigned to UN 3172."

Chapter 2: LIST OF DANGEROUS GOODS MOST COMMONLY CARRIED

Add two new paragraphs in the text preceding the list:

"(4) the proper shipping name may be shown in the plural where isomers of similar classification exist, for the purposes of documentation and package marking;

(5) hydrates of inorganic substances may be included under the equivalent proper shipping name for the anhydrous substance, as appropriate;"

Renumber existing paragraph (4) as paragraph (6)

UN numbers: 0004 to 0499 (Class 1 entries):

Amend entries according to ST/SG/AC.10/C.3/R.483, Annex 4, with amendments as follows:

Delete all existing square brackets and double square brackets.

UN numbers: 0006, 0009, 0010, 0012, 0014, 0015, 0016, 0018, 0019, 0034, 0035, 0038, 0039, 0048, 0056, 0137, 0138, 0168, 0169, 0171, 0181, 0182, 0183, 0186, 0221, 0241, 0243, 0244, 0245, 0246, 0247, 0254, 0279, 0280, 0281, 0286, 0287, 0297, 0299, 0300, 0301, 0303, 0321, 0326, 0327, 0328, 0329, 0338, 0339, 0344, 0345, 0346, 0347, 0362, 0370, 0412, 0413, 0414, 0417, 0424, 0425, 0434, 0435, 0436, 0437, 0438, 0451, 0488:

Delete Special Provision 2AI in column (b3).

UN numbers: 0075, 0143, 0180, 0181, 0183, 0186, 0280, 0281, 0295, 0329, 0330, 0340, 0341, 0433, 0436, 0437, 0438, 0451:

delete Packing Method EP 01 in column (c2).

UN numbers: 0333, 0334, 0335, 0336, 0337:

delete Special Provision 2AH in column (b3).

UN numbers: UN 0042, 0048, 0283, 0288:

delete Special Provision 2AL in column (b3).

UN numbers: 0457, 0458, 0459, 0460

delete Special Provision 2AL in column (b3);
delete Packing Method EP 32 in column (c2).

UN 0060 delete Packing Method EP 33 in column (c2).

UN 0072 amend Packing Method "EP 11(a)" in column (c2) to read "EP 12(a)".

UN 0082 add Special Provision "2AH for EP 17" in column (b3);
add "or EP 17" in column (c2).

UN 0101 amend the proper shipping name in column (a2) to read:

"FUSE, NON-DETONATING".

UN 0124 amend Packing Method EP 34 in column (c2) to read EP 01.

UN 0132 amend Packing Method EP 01 in column (c2) to read EP 14(b).

UN 0133 amend Packing Method "EP 11(a)" in column (c2) to read "EP 12(a)".

UN 0150 delete Packing Method EP 12 in column (c2).
amend Packing Method "EP 11(a)" in column (c2) to read "EP 12(a) or EP 12(b)".

UN 0203 amend Packing Method EP 01 in column (c2) to read EP 14(b).

UN 0226 amend Packing Method "EP 11(a)" in column (c2) to read "EP 12(a)".

UN 0241 add Special Provision "2AI for EP 17" to column (b3).
add "or EP 17" in column (c2).

UN 0248 amend Packing Method EP 01 in column (c2) to read EP 44.

UN 0249 amend Packing Method EP 01 in column (c2) to read EP 44.

UN 0342 amend Packing Method EP 11(b) in column (c2) to read EP 14(a).

UN 0343 delete Packing Method EP 11(b) in column (c2).
amend Packing Method EP 14 in column (c2) to read EP 11.

UN 0394 amend Packing Method "EP 11(a)" in column (c2) to read "EP 12(a)".

UN 0433 amend Packing Method EP 11(b) in column (c2) to read EP 11.

UN 0482 delete "or EP 17" in column (c2).

UN 0494 amend Packing Method EP 34 in column (c2) to read EP 01.

Insert a new entry "0500" to read:

(a1)	(a2)	(b1)	(b2)	(b3)	(c1)	(c2)
"0500	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting	1.4S	-	-	-	EP 31"

UN numbers: 1005, 1026, 1027, 1053, 1067, 1079:

delete the word "LIQUEFIED" from the proper shipping name.

UN numbers: 1008, 1016, 1023, 1071, 1660, 1859, 1911, 1957, 1979, 1980, 1981, 1982, 2036, 2190, 2193, 2198, 2203, 2417, 2451, 2600:

insert the word "COMPRESSED" in the proper shipping name.

UN numbers: 1035, 1070, 2035:

delete the word "COMPRESSED" from the proper shipping name.

UN numbers: 2845, 2846, 3194, 3200, 3203:

delete Special Provision 110 in column (b3)

UN 1009 Add the following alternative proper shipping name:
"(REFRIGERANT GAS R 13B1)"

UN 1011 Amend the proper shipping name to read "BUTANE".

UN 1014 Add the word "COMPRESSED" to the proper shipping name.
Add the Subsidiary risk 5.1.

UN 1018 Add the following alternative proper shipping name:
"(REFRIGERANT GAS R 22)"

UN 1020 Add the following alternative proper shipping name:
"(REFRIGERANT GAS R 115)"

UN 1021 Add the following alternative proper shipping name:
"(REFRIGERANT GAS R 124)"

UN 1022 Add the following alternative proper shipping name:
"(REFRIGERANT GAS R 13)"

UN 1028 Add the following alternative proper shipping name:
"(REFRIGERANT GAS R 12)"

UN 1029 Add the following alternative proper shipping name:
"(REFRIGERANT GAS R 21)"

UN 1030 Add the following alternative proper shipping name:
"(REFRIGERANT GAS R 152a)"

UN 1063 Add the following alternative proper shipping name:
"(REFRIGERANT GAS R 40)"

UN 1110 Amend the proper shipping name to read:
"n - AMYL METHYL KETONE"

UN 1199 Amend name to read:
"FURFURALDEHYDES"

Transfer from Class 3, packing group III to division 6.1, packing group II.

Add the subsidiary risk "3" to column (b2)

UN 1251 Amend name to read:
"METHYL VINYL KETONE, STABILIZED"

Transfer from Class 3, packing group II to division 6.1, packing group I.
Add the subsidiary risks "3" and "8" to column (b2)

UN 1323 Add Special Provision "249" in column (b3)

UN 1555)
UN 1556) After "N.O.S.," insert "inorganic," into the description.

UN 1695	Add the subsidiary risk "8" to column (b2) Transfer from packing group II to packing group I
UN 1858	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 1216)"
UN 1914	Amend the proper shipping name to read: "BUTYL PROPIONATES"
UN 1958	Amend the proper shipping name to read: "1,2-DICHLORO-1,1,2,2-TETRAFLUOROETHANE" Add the following alternative proper shipping name: "(REFRIGERANT GAS R 114)"
UN 1959	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 1132a)"
UN 1964	Amend the proper shipping name to read: "HYDROCARBON GAS MIXTURE, COMPRESSED, N.O.S.*"
UN 1965	Amend the proper shipping name to read: "HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S.*"
UN 1969	Amend the proper shipping name to read: "ISOBUTANE".
UN 1974	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 12B1)"
UN 1976	Add the following alternative proper shipping name: "(REFRIGERANT GAS RC 318)"
UN 1978	Amend the proper shipping name to read: "PROPANE"
UN 1982	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 14)"
UN 1983	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 133a)"
UN 1984	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 23)"
UN 1990	In column (c2), add "M".
UN 2035	Amend the proper shipping name to read: "1,1,1-TRIFLUOROETHANE". Add the following alternative proper shipping name: "(REFRIGERANT GAS R 143a)"
UN 2193	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 116)"

UN 2295	Transfer from packing group II to packing group I
UN 2348	Amend the proper shipping name to read: "BUTYL ACRYLATES"
UN 2369	To be deleted
UN 2422	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 1318)"
UN 2424	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 218)"
UN 2426	Add special provision 252 in volumn (b3).
UN 2453	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 161)"
UN 2454	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 41)"
UN 2489	To be deleted
UN 2517	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 142b)"
UN 2599	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 503)"
UN 2602	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 500)"
UN 2644	Transfer from packing group II to packing group I
UN 2658	To be deleted
UN 3159	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 134a)"
UN 3170	Amend name to read: "ALUMINIUM SMELTING or REMELTING BY-PRODUCTS"
UN 3217	To be deleted
UN 3220	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 125)"
UN 3296	Add the following alternative proper shipping name: "(REFRIGERANT GAS R 227)"

Add the following new entries:

(a1)	(a2)	(b1)	(b2)	(b3)	(c1)	(c2)
"3315	CHEMICAL SAMPLE, TOXIC liquid or solid	6.1	-	250	I	-
"3316	CHEMICAL KIT or FIRST AID KIT	9	-	251	-	-"

Chapter 3: SPECIAL PROVISIONS RELATING TO INDIVIDUAL SUBSTANCES AND ARTICLES

Amend according to ST/SG/AC.10/C.3/R.483, Annex 3 and Annex 5, paragraph 4, with amendments as follows:

Delete all square brackets and double square brackets.

2AA: Delete "Note: ... applicability".

2AB: Amend "(0495, 0497)" to read: "(0075, 0143, 0495, 0497)".

2AC: Amend "(0495, 0497)" to read: "(0075, 0143, 0495, 0497)".

2AD: in the second line amend: "form" to read: "from".

2AE: Amend to read: "When the shaped charges are packed singly, the conical cavity should face downwards and the package marked "THIS SIDE UP". When the shaped charges are packed in pairs the conical cavities should face inwards to minimise the jetting effect in the event of accidental initiation. (0059, 0439, 0440, 0441)".

2AH: Delete all text and insert: "This packing method may only be used for explosives of 0082 which are mixtures of ammonium nitrate or other inorganic nitrates with other combustible substances which are not explosive ingredients. Such explosives should not contain nitroglycerin, similar liquid organic nitrates, or chlorates."

2AI: Delete all text, and the Note and insert "This packing method may only be used for explosives of 0241 which consists of water as an essential ingredient and high proportions of ammonium nitrate or other oxidizers, some or all of which are in solution. The other constituents may include hydrocarbons or aluminium powder, but should not include nitro-derivatives such as trinitrotoluene."

2AL: Delete the first 2AL and all text.
Delete the Note under the second 2AL.

2AN: Line 3: amend "component" to read "competent".

Special Provisions 2AA to 2AP should be numbered 253 to 269.

Special Provision

105: Amend existing reference to "Special Provision 81" to read "Special Provision 80"

110: To be deleted

126: To be deleted

210: Amend to read:

"Toxins from plant, animal or bacterial sources which contain infectious substances, or toxins that are contained in infectious substances, should be classified in Division 6.2."

226: Amend to read:

"Formulations of these substances, containing not less than 30% non-volatile, non-flammable phlegmatizer are not subject to these Recommendations."

235: Insert a new sentence before the last sentence:

"If the air bag inflator unit satisfactorily passes the series 6(c) test, it is not necessary to repeat the test on the air bag module itself."

239: Amend the first sentence to read:

"Batteries or cells should not contain dangerous goods other than sodium, sulphur and/or polysulphides."

Add a new final paragraph to read:

"Batteries installed in vehicles are not subject to these Recommendations."

244: Amend to read:

"This entry includes e.g. aluminium dross, aluminium skimmings, spent cathodes, spent potliner and aluminium salt slags"

245: To be deleted

Add the following new Special Provisions:

"249 Ferrocerium, stabilized against corrosion, with a minimum iron content of 10 % is not subject to these Recommendations.

250 This entry may only be used for samples of chemicals taken for analysis in connection with the implementation of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction. The transport of substances under this entry should be in accordance with the chain of custody and security procedures specified by the Organization for the Prohibition of Chemical Weapons.

The chemical sample may only be transported providing prior approval has been granted by the competent authority or the Director General of the Organization for the Prohibition of Chemical Weapons and providing the sample complies with the following requirements:

(a) it should be packed according to Packing Instruction 623 in the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air; and

(b) during transport it should be accompanied by a copy of the document of approval for transport, showing the quantity limitations and the packing requirements.

251 The entry CHEMICAL KIT or FIRST AID KIT is intended to apply to boxes, cases etc. containing small quantities of various dangerous goods which are used for medical, analytical or testing purposes. Such kits may not contain dangerous goods listed in 15.2.

Components should not react dangerously (see 9.3.6). Dangerous goods in kits should be packed in inner packagings which should not exceed either 250 ml or 250 g and should be protected from other materials in the kit. The total quantity of dangerous goods in any one kit should not exceed either 1 l or 1 kg. The maximum total quantity of dangerous goods in any one outer package should not exceed 10 kg. The packing group assigned to the kit as a whole should be the most stringent packing group assigned to any individual substance in the kit.

Kits should be packed in packagings which meet the requirements appropriate to the packing group assigned to the kit as a whole.

Kits which are carried on board vehicles for first-aid or operating purposes are not subject to these Recommendations.

252 Provided the ammonium nitrate remains in solution under all conditions of transport, aqueous solutions of ammonium nitrate, with not more than 0.2% combustible material, in a concentration not exceeding 80%, are not subject to these Recommendations."

CHAPTER 4 SPECIAL RECOMMENDATIONS RELATING TO CLASS 1

Section 4.8: Amend according to ST/SG/AC.10/C.3/R.483, Annex 1 and Annex 5, paragraph 5, with amendments as follows:

Delete all square brackets and double square brackets.

Paragraph 4.8.2.7: Amend to read:

"Packagings for water soluble substances should be water resistant. Packagings for desensitized or phlegmatized substances should be closed to prevent changes in concentration during transport."

Paragraph 4.8.2.14: Amend to read:

"Large and robust explosives articles, normally intended for military use, without their means of initiation or with their means of initiation containing at least two effective protective features, may be carried unpackaged. When such articles have propelling charges or are self-propelled, their ignition systems should be protected against stimuli that can be met during normal conditions of transport. A negative result in Test Series 4 on an unpackaged article indicates that the article can be considered for transport unpackaged. Such unpackaged articles may be fixed to cradles or contained in crates or other suitable handling devices."

Paragraph 4.8.2.15: Delete.

Paragraph 4.8.2.16: Delete.

Paragraph 4.8.2.17: Renumber as 4.8.2.15.

Paragraph 4.8.2.18: Renumber as 4.8.2.16.

At the end of the paragraph add: (See 9.3.2)
Delete the note.

Paragraph 4.8.2.19: Renumber as 4.8.2.17.
Delete the third sentence and the note.

Paragraph 4.8.2.20: Delete.

Table 4.3: Amend according to document ST/SG/AC.10/C.3/R.483, annex 2, with the following modifications:

Note (3): Amend the first sentence to read: "The term "receptacle" used in the inner and intermediate packaging columns of this table includes boxes, bottles, cans, drums, jars and tubes, including any means of closure."

Delete the second sentence.

Note (4): Amend to read: "Reels are devices made of plastics, wood, fibreboard, metal or other suitable material comprising a central spindle with or without side walls at each end of the spindle. Articles and substances can be wound onto the spindle and may be retained by the side walls."

Note (6): Delete.

Method EP 01:

Column 2: Delete 0248, 0249, 0433, 0132, 0203, 0340, 0341, 0075, 0143, 0180, 0181, 0182, 0183, 0295, 0436, 0437, 0438, 0186, 0280, 0281, 0329, 0330 and 0451.
Add in numerical sequence to 1.1D: "0124".
Add in numerical sequence to 1.4D: "0494".

Column 6: Delete "109 for 0132".
Delete "2AA for 0132 and 0203".
Delete "2AG for 0248 and 0249".

Method EP 10:

Column 1: Delete "French Proposal".
Add "(a)" to first EP 10 and "(b)" to second EP 10.

Column 5: EP 10(a): Under drums amend (1H2) to read (1A2) and (1H.2) to read (1H2).

Column 6: EP 10(b): in the second line: move "2AM for ... 0224" to a new line.

Method EP 11(a):

Delete.

Method EP 11(b):

Renumber as EP 11.

Column 2: Delete 0342.

Column 3: Delete "(b) Compatibility Group C".
Delete "and 0342" from the Note.

Column 6: Delete 105 for 0342.

Method EP 12(a):

Column 2: Add in numerical sequence: 0072, 0133, 0226 and 0394.

Column 3: Add to bags: "Paper, multiwall, water resistant" and "Textile, rubberized".

Column 4: To bags add: "Textile, plastic coated or lined".

Add "1" to the Note.

Add "Note 2: intermediate packagings are not required for 0072 and 0226".

Column 5: Add to boxes in correct alpha-numeric sequence " aluminium (4B), plastics, expanded (4H1) and plastics, solid (4H2)". "aluminium, removable heads (1B2)" should read "aluminium, removable head (1B2)"

Column 6: Add 0394 to 2AA.
Add "2AN for 0072, 0133, 0150 and 0226".

Method EP 12(b):

Column 2: Add in correct numerical sequence in square brackets: 0072, 0133, 0226 and 0394.

Column 3: To Bags add: "paper, mulitwall, water resistant" and " Textile, rubberized".

Column 4: Delete: "Not necessary".
Add: "Bags - plastic and textile, plastic coated or lined".

Column 5: To Boxes add: in correct alpha-numeric sequence: "steel (4A), aluminium (4B), plastics, expanded (4H1) and plastics, solid (4H2)".
Move "plywood" (4D)" before fibreboard (1B2).
To drums add: in correct alpha-numeric sequence: "aluminium, removeable head (1B2)".

Column 6: Add 0394 to 2AA.

Method EP 13:

Column 6: Amend "4.8.2.18 for ... used" to read "4.8.2.16 for 0027 when inner packagings are not used".

Method EP 14(a):

Column 2: After 0236 add 0342.

Column 3: Add "Note: inner packagings are not required for 0342 when metal (1A2 or 1B2) or plastics (1H2) drums are used as outer packagings".

Column 6: Delete 0343 and insert 0342.

Method EP 14(b):

Column 2: Delete 0343.

Column 3: Delete "Sheets (*) ... for 0343 only".
Delete "(Comment: ... EP 11(b)?)".
Under Receptacles: delete ", water resistant" from paper and fibre board.

Column 6: Add "109 for 0132".
Add "2AA for 0132 and 0203".

Method 15(a), 15(b) and 15(c):

Replaced by EP 15, as follows:

METHOD	Division, Compatability Group and UN No.	Inner packagings and arrangements	Intermediate packagings and arrangements	Outer packagings and arrangements	Special Provisions
EP 15	1.1C 0497 1.3C 0495 1.1D 0075 0143 0144	Receptacles plastics metal (*)	Bags (**) plastics in metal receptacles Drums (***) metal Not necessary for 0144	Box natural wood, ordinary (4C1) plywood (4D) reconstituted wood (4F) fibreboard (4G) (****) Drums steel, removeable head (1A2) aluminium, removeable head (1B2) (*****) plywood (1D) fibre (1G)	2AB for 0075, 0143, 0495 and 0497 when Boxes are used as outer packagings. 2AC for 0075, 0143, 0495 and 0497 when Drums are used as outer packagings 224 for 0495 and 0497 2AN for 0075 and 0143 2AL for 0144
		(*) For 0144 only.	(**) To be used for 0075, 0143, 0495 and 0497 when boxes are used as outer packagings. (***) To be used for 0075, 0143, 0495 and 0497 when drums are used as outer packagings.	(****)To be used for 0144 only (*****) Not to be used for 0144	

METHOD	Division, Compatability Group and UN No.	Inner packagings and arrangements	Intermediate packagings and arrangements	Outer packagings and arrangements	Special Provisions
EP 17	1.1D 0082, 0241 1.5D 0331, 0332	Not necessary	Not necessary	IBCs(*) Metal (**)(11A) (11B)(11N)(21A) (21B)(21N)(31A) (31B)(31N) Flexible (***) (13H1)(13H2)(13H3) (13H4)(13H5)(13L1) (13L2)(13L3)(13L4) (13M1)(13M2) Rigid plastics (11H1)(11H2)(21H1) (21H2)(31H1)(31H2) Composite (11HZ1)(11HZ2)(21HZ1) (21HZ2)(31HZ1)(31HZ2) (*) For free flowing substances only (**) Not for UN 0082 and 0241 (***) For solids only.	2AH for 0082 2AI for 0241

Method EP 16:

Column 3: Note 2: after 0082 add 0084.

Add: "Note 3: inner packagings are not required for 0081 when contained in rigid plastic which is impervious to nitric esters".
Add: "Note 4: inner packagings are not required for 0331 when Bags (5H2), (5H3) or (5H4) are used as outer packagings".

Column 5: Renumber Note 3 to Note 5.

Add "Note 6: Bags should not be used as outer packagings for 0081".

Method EP 17:

Delete and replace with new EP 17, as above.

Method EP 30:

Column 3: Delete "(See 4.8.2.15)" .
After "Not necessary" add: "except for small arms ammunition".
Add: Receptacles(*)
fibreboard
metal
plastics
wood
Trays fitted with dividing partitions(*)
plastics
wood
(*) Only for 0012, 0014, 0327, 0338, 0339 and 0417.

Column 6: Delete 2AI and replace with 4.8.2.14.
Place "ie 0005 ... 0427" in brackets.
Within the brackets add in correct numerical sequence: 0238, 0240, 0453, 0242, 0279, 0414, 0012, 0014, 0327, 0338, 0339, 0417, 0457, 0458, 0459 and 0460.
Delete "2AL for 0048".
Delete "(Comment: ... unpackaged".
Add "4.8.2.16 for 0457, 0458, 0459 and 0460".

Method EP 31:

Column 2: To 1.4S add: 0500.

Column 3: Amend "(**) ... only" to read: "only for 0030, 0255, 0360, 0361, 0456 and 0500".

Column 5: Add: Drums
steel, removeable head (1A2)
aluminium, removeable head (1B2)
fibre (1G)
plastics, removeable head (1H2)

Method EP 32(a):

Column 2: Delete 0457, 0458, 0459, 0460, 1.4D and 1.4S.

Columns 3-5: Amend "(a)" to read: "Articles consisting of closed metal, plastics or fibreboard casings that contain a detonating explosive, or consisting of plastics-bonded detonating explosive."

Column 6: Delete "2AL ... 0460".

Method 32(b):

Columns 3-4: Amend "(b)" to read: "Articles without closed casings".

Colum 6: Add: "4.8.2.16 for 0042, 0060 and 0283".

Method EP33:

Column 2: Delete 0060.

Column 3: Delete "Tubes (**) ... plastics".
Delete "(**) only ... 0376".
Amend "(*)" to read "Only for 0044, 0073, 0319, 0320, 0364, 0365, 0366, 0376, 0377 and 0378".

Column 4: Amend "Receptacles (***)" to read "Receptacles (**)".
Amend "(***)" to read "(**) Only required when inner packagings are trays".

Method EP 34:

Column 2: Delete 0124, 0494 and 1.4D .

Method EP 35:

Column 3: Amend "Sheets
paper, kraft" to read:
"Sheets
paper
plastics"

Amend "Bags
paper, kraft" to read:
"Bags
paper
plastics"

Column 6: Delete "2AH .. 0337".

Method EP 38:

Column 6: Delete "2AL" and insert "4.8.2.18".

Method EP 39:

Column 3: Delete "kraft".
Add to Receptacles: fibreboard, plastics, wood.

Method EP 40:

Column 3: Amend first "Note:" to read: "Note 1:".
Amend second "Note:" to read "Note 2: For 0101, the packaging should be sift proof except when the fuse is covered by a paper tube and both ends of the tube are covered with removeable caps".

Column 6: Amend "2AL for 0105" to read: "4.8.2.16 for 0105".

Method EP 44:

New packing method for CONTRIVANCES, WATER ACTIVATED, as follows:

METHOD	Division, Compatability Group and UN No.	Inner packagings and arrangements	Intermediate packagings and arrangements	Outer packagings and arrangements	Special Provisions
EP 44	1.2L 0248 1.3L 0249	Dividing partitions in the outer packaging Receptacles fibreboard metal plastics	Not necessary	Boxes steel (4A) aluminium (4B) natural wood, ordinary (4C1) with metal liner plywood (4D) with metal liner reconstituted wood (4F) with metal liner plastics, expanded (4H1)	2AG for 0248 and 0249

CHAPTER 6: SPECIAL RECOMMENDATIONS RELATING TO CLASS 6

Paragraphs

6.1 to 6.5: Renumber as proposed in ST/SG/AC.10/C.3/R.497.

6.4.1 (renumbered 6.3.2) In the table of "GROUPING CRITERIA" , add a reference to a footnote "b" in the headings of the second and third columns (e.g., heading of second column to read "Oral toxicity LD_{50} (mg/kg)[b]") and add a new footnote "b" below the table to read:

b/ LD_{50} toxicity data for a number of common pesticides may be obtained from the most current edition of the document The WHO Recommended Classification of Pesticides by Hazard and Guidelines to Classification available from the International Programme on Chemical Safety, World Health Organization (WHO), 1211 Geneva 27, Switzerland. While that document may be used as a source of LD_{50} data for pesticides, its classification system should not be used for purposes of transport classification of, or assignment of packing groups to, pesticides, which should be in accordance with these Recommendations.

6.6 Replace by the new section 6.6 in Annex 3 to document ST/SG/AC.10/C.3/16 (delete square brackets).

6.7 (new) Insert a new 6.7 to read:

"6.7 **Classification of pesticides**

6.7.1 [Same text as existing 6.6.1]

6.7.2 If the oral or dermal LD_{50} value for a pesticide preparation is not known, but the LD_{50} value of its active substance(s) is known, the LD_{50} value for the preparation may be obtained by applying the procedures in 6.6.

6.7.3 Table 6.1 contains a list of common pesticides and a reference to the UN numbers assigned to the proper shipping names that are relevant to the generic chemical group (e.g., organophosphorus pesticide) to which the particular pesticide belongs. The proper shipping name used in the transport of the pesticide should be selected from those referenced on the basis of the active ingredient, of the physical state of the pesticide and any subsidiary risks it may exhibit."

6.7 and
6.8 Combine existing 6.7 and 6.8 as follows:

"6.8 Segregation and decontamination

6.8.1 Substances marked .....(Text of existing 6.7)

6.8.2 A railway wagon .....
(Text of existing 6.8)"

Table 6.1: Amend the title as follows:

Table 6.1: LIST OF COMMON PESTICIDES WITH CORRESPONDING UN NUMBERS

Note: The UN numbers provide a reference to the relevant proper shipping names.

Delete the 4 right columns of the table relating to packing groups.

Division 6.2 INFECTIOUS SUBSTANCES

6.9 Add a new section heading:

"6.9 Definitions"

6.9(a): Amend existing 6.9 (a) (to be renumbered 6.9.1) to read:

"6.9.1 Infectious substances are those substances known or reasonably expected to contain pathogens.

Pathogens are defined as micro-organisms (including bacteria, viruses, rickettsia, parasites, fungi) or recombinant micro-organisms (hybrid or mutant), that are known or reasonably expected to cause infectious disease in animals or humans.

However, they are not subject to the recommendations for this division if they are unlikely to cause human or animal disease."

Delete the note following 6.9 (a).

6.9.2 Insert a new paragraph 6.9.2 to read:

"6.9.2 Infectious substances should be classified in division 6.2 and assigned to UN 2814 or UN 2900, as appropriate, on the basis of an assessment whether the substance is capable of spreading disease, in which assessment the following factors should be considered:

- the probability that the substance contains a pathogen,
- the concentration of pathogen that the substance may contain,

- the amount of the substance to be transported,
- the properties of the pathogen (i.e. risk group, see WHO Laboratory Biosafety Manual) and the mode of transmission.

The criteria for each risk group according to the level of risk are as follows:

(a) Risk Group 4: a pathogen that usually causes serious human or animal disease and that can be readily transmitted from one individual to another, directly or indirectly, and for which effective treatment and preventive measures are not usually available (i.e., high individual and community risk).

(b) Risk Group 3: a pathogen that usually causes serious human or animal disease but does not ordinarily spread from one infected individual to another, and for which effective treatment and preventive measures are available (i.e., high individual risk and low community risk).

(c) Risk Group 2: a pathogen that can cause human or animal disease but is unlikely to be a serious hazard, and, while capable of causing serious infection on exposure, for which there are effective treatment and preventive measures available and the risk of spread of infection is limited (i.e., moderate individual risk and low community risk).

Note: Risk Group 1 includes micro-organisms that are unlikely to cause human or animal disease (i.e., no, or very low, individual or community risk). Substances containing only such micro-organisms are not considered infectious substances for purposes of these Recommendations."

6.9(b) To be renumbered 6.9.3.

6.9(c) Amend the existing text of 6.9. (c) (to be renumbered 6.9.4) to read:

"6.9.4 Biological products are those products derived from living organisms, that are manufactured and distributed in accordance with the requirements of national governmental authorities which may have special licensing requirements, and are used either for prevention, treatment, or diagnosis of disease in humans or animals, or for development, experimental or investigational purposes related thereto. They include, but are not limited to, finished or unfinished products such as vaccines and diagnostic products.

Note: Some licensed biological products may present a biohazard in certain parts of the world only. In that case competent authorities may require these biological products to comply with the requirements for infectious substances or may impose other restrictions."

6.9(d) In the existing text of 6.9 (d) (to be renumbered 6.9.5) after "or investigation purposes" insert "or for use in medical treatment."

6.9(e) Amend 6.9(e) (to be renumbered 6.9.6) to read:

"6.9.6 For the purposes of these Recommendations biological products and diagnostic specimens are divided into the following groups:

(a) those known or reasonably expected to contain pathogens in risk groups 2, 3 or 4 and those where a relatively low probability exists that pathogens of risk group 4 are present. Such substances should be classified in Division 6.2 under UN 2814 or UN 2900, as appropriate. Specimens transported for the purpose of initial or confirmatory testing for the presence of pathogens fall within this group;

(b) those where a relatively low probability exists that pathogens of risk group 2 or 3 are present. Specimens transported for the purpose of routine screening tests or initial diagnosis for other than the presence of pathogens fall within this group;

(c) those known not to contain pathogens."

6.9(f) To be renumbered 6.9.7.

Rearrange 6.10 to 6.18 in accordance with ST/SG/AC.10/C.3/R.497.

CHAPTER 9: GENERAL RECOMMENDATIONS ON PACKING

9.1.9: (new) Add a new paragraph 9.1.9 to read as follows:

"9.1.9 Damaged, defective or leaking dangerous goods packages, or dangerous goods that have spilled or leaked may be transported in special salvage packagings mentioned in 9.7.1.11. [This does not prevent the use of a bigger size packagings of appropriate type and performance level under the conditions of paragraph 9.3.15]"

9.2.1 After the definition of "Inner receptacles" add the following definition:

"Intermediate packagings are packagings placed between inner packaging, or articles, and an outer packaging."

After the definition of "Reused packagings" add the following definition:

"Salvage packagings are special packagings conforming to the applicable provisions of this chapter into which damaged, defective or leaking dangerous goods packages, or dangerous goods that have spilled or leaked, are placed for purposes of transport for recovery or disposal."

9.3.15 (new) Insert a new paragraph 9.3.15 to read as follows:

"9.3.15 Appropriate measures should be taken to prevent excessive movement of the damaged or leaking packages within the salvage packaging and when the salvage packaging contains liquids, sufficient absorbent material should be added to eliminate the presence of free liquid."

Renumber existing paragraph 9.3.15 to 9.3.16.

9.4.4 Amend the first three sentences in paragraph 9.4.4 to read:

"The letter 'T' or 'V' or 'W' may follow the packaging code. The letter 'T' signifies a salvage packaging conforming to the provisions of 9.7.1.11. The letter 'V' signifies a special packaging conforming to the provisions of 9.7.1.7." (Remainder of paragraph 9.4.4 unchanged).

9.5.8 (new) Add a new paragraph 9.5.8 to read:

"9.5.8 Example of marking for salvage packaging:

u	1A2T/X300/S/94	as in 9.5.1 (a),(b),(c) and (e)
n	USA/abc	as in 9.7.1.11 (c) as in 9.5.1 (f) and (g)

9.7.2.5 Amend first sentence to read:

"Additional steps should be taken to ascertain that the plastics material used in the manufacture of plastic drums, plastics jerricans and composite packagings (plastics material) intended to contain liquids complies with the provisions in 9.3.2, 9.6.7.1 and 9.6.7.4."

9.7.3.2 Sub-paragraphs (a), (b), (c) remain unchanged.

Subparagraph (d): After "(see 9.6.18)", add "and".

Subparagraph (e): amend to read:

"Combination packagings with plastics inner packagings, other than plastics bags intended to contain solids or articles."

Subparagraphs (f), (g) and (h) to be deleted.

Remainder unchanged.

9.7.11 (new) Add a new paragraph 9.7.1.11:

"9.7.1.11 Salvage packagings (see 9.2.1) should be tested and marked in accordance with the provisions applicable to packagings intended for the transport of solids or inner packagings, except as follows:

(a) The test substance used in performing the tests should be water, and the packagings should be filled to not less than 98% of their maximum capacity. It is permissible to use additives, such as bags of lead shot, to achieve the requisite total package mass so long as they are placed so that the test results are not affected. Alternatively, in performing the drop test, the drop height may be varied in accordance with 9.7.3.4(b).

(b) Packagings should, in addition, have been successfully subjected to the leakproofness test at 30 kPa, with the results of this test reflected in the test report required by 9.7.8; and

(c) Packagings should be marked with the letter 'T' as described in 9.4.4."

Chapter 10: SPECIAL RECOMMENDATIONS ON PACKING FOR CLASS 1

To be deleted. (see ST/SG/AC.10/C.3/R.483, Annex 5, paragraph 6.)

Chapter 11: SPECIAL RECOMMENDATIONS RELATING TO CLASS 5

11.3.8.2: Replace "10.1.1 and 10.1.3" with "4.8.2.9 and 4.8.2.10".

Chapter 12: RECOMMENDATIONS ON MULTIMODAL TANK TRANSPORT

Amend Tables 12.1 and 12.2 in accordance with the modifications to Chapter 2.

Table 12.2

At the beginning, add a note 14 to read (text of deleted SP 245):

"Temperature should be maintained between 18 °C and 40 °C. Tanks containing solidified methacrylic acid should not be reheated during transport."

Amend the following entries to read:

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
"1199	Furfuraldehydes	6.1/II	3	2.65	12.5.2	A/12.7.3	N.	12.22.3"
"1251	Methyl vinyl ketone, stabilized[9]	6.1/I	3 8	4	6mm	N.A.	12.9.3	12.22.3"
"1695	Chloroacetone, stabilized[9]	6.1/I	3 8	6	8mm	N.A.	12.9.3	12.22.3"
"2295	Methyl chloroacetate[9]	6.1/I	3	4	12.5.2	N.A.	12.9.3	12.22.3"
"2644	Methyl iodide	6.1/I	-	4	12.5.2	N.A.	12.9.3	12.22.3"

UN 2531 Add superscript 14 after the name

Add the following new entry:

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
"1990	Benzaldehyde	9/III	-	1.5	12.5.2	A/12.7.2	N.	12.22.2"

Chapter 13: RECOMMENDATIONS ON CONSIGNMENT PROCEDURES

13.3.1 (c) Amend the end to read:

"".....handling, stowage and segregation."

13.10: (new) Insert a new section 13.10 to read as follows:

"13.10 **Salvage packagings**

Salvage packagings should be marked with the proper shipping name and UN number of, and bear all labels prescribed for, the dangerous goods contained therein and in addition, should be marked with the word 'SALVAGE'. The words "SALVAGE PACKAGE"

should be added after the description of the goods in the dangerous goods transport document required by 13.6."

Existing section 13.10 is renumbered to 13.11.

13.12: (new) Add a new section 13.12 to read:

"13.12 **Segregation of Dangerous Goods**

13.12.1 Incompatible goods should be segregated from one another during transport. For the purpose of segregation, two substances or articles are considered mutually incompatible when their stowing together may result in undue hazards in the case of leakage, spillage, or any other accident. In this regard, detailed segregation requirements for substances and articles of class 1 are provided in Chapter 4.

13.12.2 The extent of the hazard arising from possible reactions between incompatible dangerous goods may vary and the segregation arrangements required should also vary as appropriate. In some instances such segregation may be obtained by requiring certain distances between incompatible dangerous goods. Intervening spaces between such dangerous goods may be filled with cargo compatible with the dangerous substances or articles in question.

13.12.3 The provisions of the Recommendations are general in nature. The segregation requirements for each particular mode of transport should be based on the following principles:

13.12.3.1 Incompatible dangerous goods should be segregated from one another so as to effectively minimize hazards in the event of accidental leakage or spillage or any other accident.

13.12.3.2 Whenever dangerous goods are stowed together, the most stringent segregation requirements for any of the goods should be applied.

13.12.3.3 For packages required to bear a subsidiary risk label, the segregation appropriate to the subsidiary hazard should be applied when it is more stringent than that required by the primary hazard."

CHAPTER 14: SPECIAL RECOMMENDATIONS RELATING TO CLASS 4

14.2.2.7.3: Replace "10.1.1 and 10.1.3" with "4.8.2.9 and 4.8.2.10".

14.5.5.4: (new) Add a new sub-paragraph 14.5.5.4 to read as follows:

"14.5.5.4 Exemption of packing group III substances transported in IBCs and in packagings.

Packing Group III substances which are transported in packages with a volume not more than $3m^3$ should be subject to the provisions of Division 4.2 only if in the test described in 14.5.5.2 conducted with a 100 mm cube sample kept at 120 $\pm$ 2°C during the twenty-four hour testing time, a spontaneous ignition occurs or the sample temperature exceeds 200°C.

Packing Group III substances which are transported in packages with a volume not more than 450 l should be subject to the provisions of Division 4.2 only if in the test described in 14.5.5.2 conducted with a 100 mm cube sample kept at 100 ± 2°C during the twenty-four hour testing time a spontaneous ignition occurs or the sample temperature exceeds 200°C.

The flow chart in Figure 14.4 illustrates the classification, packing group assignment and exemption procedure."

(For Figure 14.4, see end of this annex).

CHAPTER 15: SPECIAL RECOMMENDATIONS FOR DANGEROUS GOODS IN LIMITED QUANTITIES

15.2 (e) Amend to read:

"(e) Organic peroxides requiring temperature control of Division 5.2".

Delete footnote [1/].

Table 15.1: At the end of footnotes b/ and c/, read "See 11.3.3 and 11.3.5".

(delete "and footnote to 15.2(e)").

Table 15.2: Add the following entries to the table:

UN Number	Proper shipping name	Maximum quantity per inner packagings
1990	BENZALDEHYDE	5 l
3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	5 kg
3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	5 l

CHAPTER 16: RECOMMENDATIONS ON INTERMEDIATE BULK CONTAINERS (IBCs)

16.4.8.1 Amend to read:

"16.4.8.1 Additional steps should be taken to ascertain that the plastics material used in the manufacture of rigid plastics IBCs of types 31H1 and 31H2 complies with the provisions of 16.4.3.1 to 16.4.3.3."

16.5.8.1 Amend to read:

"16.5.8.1 Additional steps should be taken to ascertain that the plastics material used in the manufacture of composite IBCs of types 31HZ1 and 31HZ2 complies with the provisions of 16.5.3.2.1 to 16.5.3.2.3."

16.5.10 Existing text becomes 16.5.10.1.

Add a new subparagraph 16.5.10.2 to read:

"16.5.10.2 The inner receptacle of composite IBCs should be marked with at least the following information:

The name or symbol of the manufacturer and other identification of the IBC as specified by the competent authority as in 16.1.5.1 (f);

The date of manufacture, as in 16.1.5.1 (d); and

The distinguishing sign of the State authorizing the allocation of the mark, as in 16.1.5.1 (e)".

Appendix A

Amend the existing entries in the list of generic or n.o.s. proper shipping names and add new entries in accordance with the amendments to Chapter 2.

INDEX

Amend the existing entries in the index and add new entries in accordance with the amendments to Chapter 2.

Figure 14.4 Flow Chart for Classification, Packing group assignment and Exemption for certain package volume